

CLAIMS

We claim:

1. A pectin comprising soy pectinaceous material having a lightness index above about 85 L.
2. The pectin of claim 1, wherein the lightness index is above about 87 L.
3. The pectin of claim 1, wherein the lightness index is above about 90 L.
4. The pectin of claim 1, wherein the pectin comprises about 40 wt.% galacturonic acid, about 16 wt.% of a mixture of xylose and mannose, about 8 wt.% galactose, about 1.5 wt.% rhamnose, about 4 wt.% glucose, about 2.5 wt.% arabinose, about 1.5 wt.% fucose, about 1 wt.% Cellulose, about 8 wt.% protein and about 2% moisture.
5. The pectin of claim 1, wherein the pectin has about 40% by weight galacturonic acid and about 16% by weight of a mixture of xylose and mannose.
6. The pectin of claim 1, wherein the pectin has about 25% by weight of esterified sugar residues and a methoxyl content of about 1.5%.
7. The pectin of claim 1, wherein the pectin has a degree of acetylation of about 25%.
8. The pectin of claim 1, wherein the pectin has a molecular weight of about 21 kD.
9. The pectin of claim 1, wherein the pectin has an AGA purity of about 55%.
10. The pectin of claim 1, wherein the pectin has an AGA purity above 60%.

1 11. A method for producing soy pectin comprising the steps of:
2 extracting a soybean hull/hypocotyl mixture in a mineral acid at an elevated
3 temperature and for a time and at a pH sufficient to extract a pectinaceous soy material from
4 the mixture;
5 cooling the extracted pectinaceous material and raising the pH;
6 separating the extract from the solid residue;
7 precipitating the pectinaceous material in an alcohol; and
8 drying the pectinaceous material to form soy pectin.

1 12. The method of claim 11, further comprising the step of:
2 pre-washing the hull/hypocotyl mixture in the presence of a solvent for a time and
3 temperature sufficient to produces a pre-extraction mixture has a percent transmittance above
4 about 35% on liquid .

1 13. The method of claim 12, further comprising the step of:
2 soaking the washed hull/hypocotyl mixture in the presence of a solvent for a time,
3 temperature and pH sufficient to expand the cellular matrix of the washed mixture.

1 14. The method of claim 11, further comprising the step of:
2 post-washing the precipitated pectinaceous material with pressing in the presence of
3 a solvent sufficient number of times to wash the material.

1 15. The method of claim 14, wherein the post-washing step comprising:
2 three 70% 2-propanol washings and two 100% 2-propanol washings with pressing
3 after each washing.

1 16. The method of claim 14, further comprising the step of:
2 slowly evaporating the 2-propanol from the pectinaceous material for a time sufficient
3 to enhance the whiteness of the pectin product.

1 17. The method of claim 11, further comprising the step of:
2 evaporating the pectinaceous material under a vacuum at an elevated evaporation
3 temperature.

1 18. The method of claim 11, further comprising the step of:
2 grinding the pectin product.

1 19. A food stuff comprising a soy pectinaceous material having a lightness index above
2 about 85 L.

1 20. A food additive comprising a soy pectinaceous material having a lightness index
2 above about 85 L.